AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

1. (Currently amended) Device for illuminating a line surface (3) having a light source (1, 9) designed to have a linearly arranged illumination and having at least one linearly formed optical element (2, 10), wherein in a region of said optical elements (2, 10) of said light source (1, 9) said device comprises at least one diaphragm (6) having a ~~characteristic~~ shape which effects a variable numerical aperture along the diaphragm at locations corresponding to a projection of the light through the light through the diaphragm in a direction of the line to decrease a light intensity associated with an imaging lens to substantially reduce vignetting (decrease in light intensity at an end of the line).

2. (Previously presented) Device according to claim 1, wherein the variable numerical aperture is designed in such a manner that the vignetting, which occurs when imaging a line by means of a lens, is compensated according to $E(w) = E * \cos4(w)$.

3. (Original) Device according to claim 2, wherein the diaphragm (6, 14) is made of a non-transmissive material.

4. (Original) Device according to claim 2, wherein the diaphragm (6, 14) is made of a spectral transmissive material.

5. (Previously presented) Device according to claim 2, wherein the diaphragm (6, 14) is made of a material having a combination of spectral transmissive and non-transmissive patterns.

6. (Original) Device according to claim 2, wherein the diaphragm (6, 14) is made of a phase shifting structured material.

7. (Previously presented) Device according to claim 1, wherein the variable numerical aperture is designed in such a manner that the vignetting, which occurs when imaging a line by means of a lens, is compensated according to a mathematical dependency.

8. (Currently amended) Method for providing illumination of a surface, the method comprising:

providing a linearly arranged light source, including at least one optical element;

providing at least one diaphragm having a ~~characteristic~~ shape, in the region of said optical elements of said light source, which effects a variable numerical aperture along the diaphragm at locations corresponding to a projection of the light through the light through the diaphragm in a longitudinal direction, in a manner calculated to substantially reduce vignetting produced by a natural decrease in light intensity associated with an imaging lens.

9. (Previously presented) Method according to claim 8, comprising selecting the variable numerical aperture in such a manner to compensate for vignetting, which occurs when imaging a line by means of a lens, according to $E(w) = E * \cos4(w)$.

10. (Previously presented) Method according to claim 8, comprising selecting the variable numerical aperture in such a manner to compensate for vignetting, which occurs when imaging a line by means of a lens, according to a mathematical dependency.

11. (Previously presented) Device according to claim 1, comprising using a spectral transmissive material for the diaphragm.

12. (Previously presented) Device according to claim 1, comprising using a material having spectral transmissive and non-transmissive patterns for the diaphragm.

13. (Currently amended) Device according to claim 1, comprising using a [[a]] phase shifting structured material for the diaphragm.

14. (Previously presented) Device according to claim 1, comprising selecting the diaphragm so as to compensate for vignetting, which occurs when imaging a line by means of a lens, according to a mathematical dependency.

15. (Currently amended) Device according to claim 1, wherein said ~~characteristic~~ shape of said diaphragm is at least one of a curved edge or rim (7).

16. (Currently amended) Method according to claim 8, wherein said ~~characteristic~~ shape of said diaphragm is at least one of a curved edge or rim (7).